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| 20583 | 7550 | 02/29/2008 | | |
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| EXAMINER | | | | |
| STAPLES, MARK | | | | |
| ART UNIT | | PAPER NUMBER | | |
| 1637 | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/813,506

Applicant(s)

SHOEMAKER ET AL.

Examiner

Mark Staples

Art Unit

1637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 122, 178 and 185-232 is/are pending in the application.
- 4a) Of the above claim(s) 178, 186-188, 190, 191, 193-196, 198, 199, 201-220, and 225-227 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 122, 185, 189, 192, 197, 200, 221-224, 226, and 228-232 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 10/31/2007.
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date: 08/14/2007.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/31/2007 has been entered.

Claims 122, 185, 189, 192, 197, 200, 221-224, 226, and 228-232 are pending and at issue.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Rejections Maintained

Claim Rejections Maintained - 35 USC § 103

2. The rejection of claims 122, 189, 192, 197, 200, 221-222, 224, 226, and 228-232 under 35 U.S.C. 103(a) as being unpatentable over Lockhart et al. in view of Bowtell is maintained.

Applicant's arguments presented in Interview on 08/14/2007 and in Remarks filed 02/14/2007 have been fully considered but they are not persuasive. It is noted that Applicant presents new arguments. However upon further consideration, as given below, the claimed invention would still have been obvious in view of the reference cited in the rejection.

Applicant argues (see Remarks last paragraph on p. 9) that Bowtell does not teach the less than 500 bp distance between 5' prime ends of sequential probes. However Bowtell is not relied upon for this teaching, Lockhart et al. are. Applicant further argues that Bowtell further does not teach this by his referencing DiRisi et al. and Goffeau et al. (see Remarks p. 10 to top of p. 11, including 1st full paragraph). Again however, Bowtell is not relied upon for this teaching, Lockhart et al. are relied upon for this teaching. Furthermore, Bowtell goes beyond the teachings of DiRisi et al. and Goffeau et al. and in any regard, Bowtell teaches probes which span a genomic region of at least 25,000 bp (see 1st paragraph on p. 12 of Office Action mailed on 11/14/2006).

In response to applicant's argument that the references fail to show certain features of applicant's invention (see Remarks, top of p. 11) , it is noted that the features upon which applicant relies (i.e., "noncoding sequences") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to applicant's argument that the references fail to show certain features of applicant's invention (see Remarks, next to last sentence of paragraph 2 on

p. 11) , it is noted that the features upon which applicant relies (i.e., "sequence of interest") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

On page 11, Applicant argues that Lockhart et al. teach signature sequence identification and Bowtell et al. teach whether genes are expressed and thus that the elements of Lockhart and Bowtell appearing in the claimed invention are not used according to their predictable function. However, while Lockhart et al. do teach signature sequence identification, they also teach whether gene are expressed as follows:

"All of the methods discussed herein can include: correlating RNA levels with gene sequences of interest; the identification and use of expression patterns; and the narrowing of expression pattern information in a hierarchical fashion; or the selection, including by experimental design, of subsets of particular expression profiles. For example, one can look for the absence of sequence signatures of enzymes involved in a particular metabolic pathway. If one or more of the sequence signatures are missing, one may conduct a second assay for the sequence signatures of other enzymes that can or are thought to metabolize the excess accumulation of bioproducts that results from the enzyme deficiency screened for in the first assay." (see column 14 lines 34-47).

On page 11, Applicant then argues that that there is no specific teaching, suggestion, or motivation in Lockhart et al. and Bowtell et al. to combine these prior art

references. Examiner disagrees as noted directly above. Regardless, the argument that a specific teaching, suggestion, or motivation is required to support an obviousness rejection over prior art is foreclosed by *KSR* (see the recent Board decision *Ex parte Smith*, --USPQ2d--, slip op. at 20, Bd. Pat. App. & Interf. June 25, 2007 which cites *KSR*, 82 USPQ2d at 1396, available at <http://www.uspto.gov/web/offices/dcom/bpai/prec/fd071925.pdf>).

Furthermore, by simple substitution one would have arrived at the claimed invention. Lockhart et al. teach arrays of probes of 299 bp (less than 500 bp) to span a region of gene expression. Bowtell teach arrays of probes which span expressed genes of genomes of greater than 25,000 bp. Because both Lockhart et al. and Bowtell teach arrays of probes for expressed genes, it would have been obvious to one skilled in the art to substitute the 299 bp probes as taught by Lockhart et al. as the probes taught by Bowtell in order to achieve the predictable result of arrays of probes of 299 bp which span a genomic region of at least 25,000 bp.

Another argument presented in the Interview was that the probes of Lockhart et al. determined a non-contiguous sequence. In response to applicant's argument that the reference fails to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "non-contiguous sequence") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Thus the rejection is maintained.

3. The rejection of claim 223 under 35 U.S.C. 103(a) as being unpatentable over Lockhart et al. and Bowtell and further in view of Schena et al. is maintained.

Applicant's arguments presented in Remarks filed 02/14/2007 have been fully considered but they are not persuasive.

Applicant argues (see Remarks last paragraph on pp. 12 and 13) that Schena et al. teach arrays of probes that measure gene expression using expressed plant genes as controls and that there is no motivation to combine the teaching of Schena et al. with Lockhart et al. and Bowtell. However as noted above both Lockhart et al. and Bowtell also teach arrays for gene expression.

Thus, by simple substitution one would have arrived at the claimed invention. Lockhart et al. and Bowtell teach arrays for gene expression which have probes of 299 bp which span a genomic region of at least 25,000 bp. Schena et al. teach arrays of probes that measure gene expression using expressed plant genes as controls. Because both Lockhart et al. and Bowtell and Schena et al teach arrays of probes for expressed genes, it would have been obvious to one skilled in the art to substitute probes for expressed genes of plants as taught by Schena et al. as the probes taught by Lockhart et al. and Bowtell in order to achieve the predictable result of arrays of probes of 299 bp which span a plant genomic region of at least 25,000 bp.

Furthermore, the argument that a specific teaching, suggestion, or motivation is required to support an obviousness rejection over prior art is foreclosed by *KSR* (see the recent Board decision *Ex parte Smith*, --USPQ2d--, slip op. at 20, Bd. Pat. App. &

Interf. June 25, 2007 which cites *KSR*, 82 USPQ2d at 1396, available at <http://www.uspto.gov/web/offices/dcom/bpai/prec/fd071925.pdf>).

Thus the rejection is maintained.

Species Election

4. As the claims to elected species remain rejected, the claims to non-elected species are not examined.

Conclusion

5. No pending claim is free of the prior art.
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Staples whose telephone number is (571) 272-9053. The examiner can normally be reached on Monday through Thursday, 9:00 a.m. to 7:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached on (571) 272-0782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Mark Staples
/M. S./
Examiner, Art Unit 1637
February 20, 2008

/Kenneth R Horlick/
Primary Examiner, Art Unit 1637